REMARKS

Favorable reconsideration of this application in view of the above amendments and following remarks is respectfully requested.

Claim 1 is pending in this application. By this amendment, Claim 1 is amended; Claims 2 and 3 are canceled; and no claims are added herewith. It is respectfully submitted that no new matter is added by this amendment.

In the outstanding Office Action, Claim 1 was rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 5,763,971 to Takahata in view 20030104246 to Watanabe; and Claim 2 was rejected under 35 U.S.C. § 103(a) as unpatentable over Takahata and Watanabe and further in view of U.S. Patent No. 6,369,476 to Sung.

It is respectfully submitted that the applied art does not teach or suggest that the superconductor unit includes a plurality of circumferentially divided superconductor bulks, as recited in Claim 1.

Instead, as discussed in column 5, lines 8 to 61 and Fig. 2 of Takahata, a superconductive magnetic bearing includes a stationary bearing portion having an annular superconductor 35 provided on a fixed portion, and a rotatable bearing portion having an annular permanent magnet portion 30 provided on a rotary portion so as to be opposed to the superconductor 35. The rotary portion is contactlessly supported relative to the fixed portion by the pinning effect of the superconductor 35. Further, the permanent magnet portion 30 of the rotatable bearing portion includes annular permanent magnet members 33a, 33b, 33c and annular yokes 34 arranged between the adjacent permanent magnet members 33a, 33b, 33c, on the upper side or the uppermost permanent magnet member 33a, and on the lower side of the lowermost permanent magnet member 33c, respectfully.

That is, the permanent magnet members 33a, 33b, 33c of Takahata substantially correspond to the permanent magnet units in Claim 1 of the present application, respectfully,

and the yokes 34 of Takahata substantially correspond to the yokes in Claim 1 of the present application. In addition, the permanent magnet members 33a, 33b, 33c of Takahata in their entirety consist of one permanent magnet member as recited in Claim 1 of the present application, and the yokes 34 of Takahata in their entirety consist of one yoke member as recited in Claim 1 of the present application.

In contrast, according to Claim 1 of the present application, each of the permanent magnet units corresponding to the permanent magnet members 33a, 33b, 33c of Takahata comprise a plurality of permanent magnet members arranged in superposed layers along with insulating layers. Further, each of the yokes corresponding to the yokes 34 of Takahata comprise a plurality of yoke members arranged in superposed layers along with insulating layers. Therefore, Takahata does not describe nor even suggest that the permanent magnet members 33a, 33b, 33c corresponding to each of the permanent magnet units as recited in Claim 1 of the present application comprise a plurality of the permanent magnet members arranged in superposed layers.

According to one or more embodiments of the invention, in the case where the superconductor unit is circumferentially divided into a plurality of superconductor bulks, the magnetic fields set up by the superconductor unit becomes circumferentially uneven, and when the permanent magnet units rotate with the rotatable body, the permanent magnet units are subjected to changes in magnetic fields. However, with the superconductive magnetic bearings according to the present invention, because each of the permanent magnet units comprises a plurality of the permanent magnet members arranged in superposed layers along with insulating layers, the eddy currents to be produced in the permanent magnet units diminish to reduce the resulting rotation loss. In addition, when the yokes are subjected to varying magnetic fields while rotating with the rotary portion, eddy currents are produced also on the yokes. However, since the yokes each comprise yoke members of magnetic

material as arranged in superposed layers with an insulating layer provided between each adjacent pair of yoke members, the eddy currents to be produced on the yokes diminish to reduce the rotation loss to be otherwise produced by the eddy currents. Therefore, (a) the reduction of the rotation loss due to the construction that each of the permanent magnet units comprises a plurality of the permanent magnet members arranged in superposed layers along with insulating layers combined with (b) the reduction of the rotation loss due to the construction that each of the yokes includes a plurality of the yoke members made of a magnetic material and arranged in superposed layers along with insulating layers, makes the effects of reducing the rotation loss become greater.

Neither Watanabe nor Sung makes up for the deficiencies of Takahata discussed above. Even if Watanabe describes that the insulating layers are arranged between the adjacent magnet members, the combination of Takahata and Watanabe does not render obvious the features of the claimed invention. Again, Takahata does not teach or suggest that yokes 34 comprise a plurality of yoke members arranged in superposed layers. Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. §103(a) is respectfully requested.

Consequently, for at least the reasons discussed above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

Respectfully submitted,

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